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Reliability versus affiliation: Selective trust in accented speakers

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Reliability versus affiliation: Selective trust in accented speakers

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Report

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Abstract

Reliability versus affiliation: Selective trust in accented speakers

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Recent work has shown that preschoolers track informants' past reliability concerning familiar information and labels, and they use this information to judge the correctness of novel information and labels they provide. But linguistic factors also sway children's choices for social interaction, for which native-accented speakers are preferred. The present study uses the selective trust paradigm to consider how accentedness interacts with speaker reliability with native- and foreign-accented informants. The results show that speaker reliability and accentedness affect four-year-olds' choices, but the impact of these factors differed by response type. Preschoolers preferred to ask the native-accented speaker for information, regardless of his reliability. However, in choosing which label to learn, preschoolers selected the reliable speaker's label, regardless of accent, and correctly identified the unreliable speaker. This study provides evidence suggesting that young children separate their social biases from their objective assessment of novel information.

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Introduction

Children are exposed to a range of linguistic input from sources varying in trustworthiness: many speakers produce predictably familiar language, some speakers use familiar words but with different meanings (e.g. dialectal differences), others are misinformed or misleading, and still others are intentionally deceiving. Recent work has shown that preschoolers track informants' past reliability and use this information to judge the conventionality of the information these informants provide, such that by four years of age children selectively endorse novel labels and object functions offered by historically reliable informants. However, another preference is clear at this age: the desire for social interaction with members of the child's own social group. The present study addresses how social group preferences interact with preschoolers' perceptions of speaker reliability.

In order to learn the words accepted by their linguistic community as the conventional terms for labeling objects, children must determine the reliability and universality of this input. Not all informants are created equal, and those with a history of inaccuracy (Clément, Koenig, & Harris, 2004), of mislabeling familiar objects (Birch, Vauthier, & Bloom, 2008; Koenig, Clément, & Harris, 2004), or of being unable to perform basic tasks (Zmyj, Buttelmann, Carpenter, & Daum, 2010) are judged by preschoolers to be unreliable informants. Children do not endorse (i.e., imitate or prefer) the actions or labels of such speakers and instead selectively learn novel actions and novel labels from historically accurate speakers, with their memories for speaker reliability lasting at least a week (Corriveau & Harris, 2009a). While the endorsement of the reliable speaker has been a consistent finding in the literature, reliability has not been

the only factor to influence children's judgments. For example, children selectively endorse adult novel labels over novel labels introduced by a child, even when both had been reliable, unless the child had been reliable and the adult unreliable (Jaswal & Neely, 2006). This suggests that while children have predispositions about what kind of speaker to trust, this preference can be overridden in the face of unreliability. Another factor influencing judgments is familiarity with one of the two 'competing' informants, which trumps accuracy. Children selectively endorse their own teacher over an unfamiliar teacher even when their own teacher has named familiar objects incorrectly (Corriveau & Harris, 2009b). Children are also willing to forgive speakers whose inaccuracy or ignorance resulted from being distracted (Jaswal & Malone, 2007), producing a related label (Einav & Robinson, 2010), or being uninformed or otherwise prevented from knowing about the object (Nurmsoo & Robinson, 2009; Ganea, Koenig, & Gordon Millett, 2011). An age difference has emerged as well: four-year-olds are better able to integrate their own experience with competing cues, such as degrees of reliability and accuracy, than are three-year-olds (Clément et al., 2004; Pasquini, Corriveau, Koenig, & Harris, 2007; Corriveau, Meints, & Harris, 2009), and four-year-olds are also better able to revise their decisions in light of new information (Scofield & Behrend, 2008).

Another factor that may influence reliability judgments is the perceived proficiency or community membership of each informant. In a variety of recent work, language and foreign accent have been investigated as such a factor. As early as at 14 months, infants selectively imitate native-language speakers over foreign-language speakers (Buttelmann, Zmyj, Daum & Carpenter, 2012). In studies with older children, Kinzler and colleagues have found that monolingual English-speaking 5-year-olds prefer to be friends with English speakers over French speakers (Kinzler, Dupoux, & Spelke, 2007) and with native-accented speakers over foreign-accented speakers (Kinzler et al.,

2007; Kinzler, Shutts, DeJesus, & Spelke, 2009; Kinzler, Corriveau, & Harris, 2011). This preference is maintained even when the accented speaker is of the same race as the child and the native speaker is of a different race, despite the preference for same-race children when no speech is produced (Kinzler et al., 2009; Kinzler & Spelke, 2011). However, children in these tasks were exposed to speakers making statements that were neutral in content, and they had been invited to think about how the speakers sounded. In Kinzler et al. (2009) children were told "Let's hear what [the two children] sound like," thus these children may have attended to speaker accent characteristics more than they do typically. While these results suggest children prefer to socialize or associate themselves with speakers who sound like them and are thus part of the same linguistic community, the question remains what other judgments children may make about speakers who have an accent. Can accented speakers be preferred in other contexts? Do children make linguistic reliability or competence judgments based on an informant's accent? It may be the case that this preference for native-accented speakers can be mitigated by other factors, such as speaker reliability, so that a reliable speaker is preferred over an unreliable speaker even when the unreliable speaker is native-accented and the reliable speaker foreign-accented.

The current project seeks to evaluate how accentedness interacts with speaker reliability in a word-endorsing task in which two informants both offer possible labels for a novel object. Since previous work by Kinzler and colleagues has shown a preference for native-accented speakers in the face of other factors (specifically, race), a second variable was introduced to determine if multiple cues in favor of a foreign-accented speaker would improve the chances of overriding the native-accent bias. The plausibility of the novel word offered by each speaker was manipulated between a phonotactically legal sequence in English following the phonotactic rules of English, and a

phonotactically illegal sequence of English, which did not conform to English phonotactics. By age two, children are sensitive to the phonotactics of their language, and they learn phonotactically legal sequences (e.g. *dref*) better than illegal sequences (e.g. *dlef*) (Graf-Estes, Edwards, & Saffran, 2011). If the phonotactics of a novel word are taken into account by preschoolers when choosing to endorse one novel label over another, this cue may be salient enough that, when a phonotactically legal label is produced by a reliable accented speaker, the previously attested preference for native speakers will be suppressed (Kinzler, et al., 2009, 2011).

Four-year-olds are expected to selectively endorse the native speaker over the foreign-accented speaker, even when this means endorsing the unreliable (native) speaker. That is, overall, accentedness and thus community membership are expected to be preferred over reliability, with children relying on the novel labels introduced by the native-accented speaker. Community membership is also expected to be privileged over phonotactics, with children preferring the native speaker unless he is both unreliable and uses an illegal label. Likewise, the accented speaker is expected to be dispreferred unless he is reliable and the native speaker uses a word illegal in English.

Method

PARTICIPANTS

Twenty-four four-year-olds (13 females; *M* = 53.5 months; range = 48 months to 60 months) were included in the current study. All children were monolingual English speakers. Seven additional children were tested but excluded from the sample for failing to correctly label all three familiar objects (n=4) (cf. Pasquini et al., 2007), for being uncooperative (n=2), or for experimenter error (n=1). The parent accompanying the child completed a questionnaire about the child's exposure to accents and foreign languages to determine if the child had regular exposure to speakers of foreign languages who interact with the child primarily in English (i.e., in foreign-accented English). Due to challenges quantifying experience with accented speech, variation in amounts of exposure to accented speech will be addressed in later work. However, of the 24 preschoolers included in the present study, most had minimal exposure to accented speech, with the exception of seven children who had a teacher or grandparent who spoke English with a foreign-accent.

MATERIALS

Speakers and videos

Short videos were recorded in which two speakers, one native-accented and one foreign-accented, interacted with a 'moderator' who presented the speakers with objects and asked for their names. The moderator and the native-accented speaker were both born and raised in the U.S. and were monolingual speakers of American English. The foreign-accented speaker was born and raised in Spain, is a native speaker of Spanish and Catalan, and began learning English at age 13. At the time of the video recordings, he had lived in the U.S. for six years to attend graduate school. The moderator stood and wore a

tan shirt, while the native- and foreign-accented speakers wore a red and blue shirt, respectively, and sat at a table facing the camera. Both speakers were white, of comparable height and build, and wore glasses.

Labels

In order to test if children are sensitive to the well-formedness of the input in addition to characteristics of the informants, the kind of novel labels offered at test was manipulated. Since previous work suggests a bias in preschoolers against foreign-accented speakers (Kinzler et al., 2007; 2009; 2011), the foreign-accented speaker always produced novel labels that followed English phonotactics, so as to avoid having 'two strikes' against him. The native-accented speaker, however, produced a phonotactically legal word in half the conditions and a phonotactically illegal form in the other half of the conditions. Each novel object was thus assigned two novel labels following English phonotactics, for the conditions in which both speakers produced well-formed labels (Object 1: *blick* and *fisp*; Object 2: *tream* and *koob*; and Object 3: *pabe* and *krat*), and one novel label with a sequence of consonants impossible in English onsets, for the condition in which the native-accented speaker produced an illegal label (Object 1: *bween*; Object 2: *pfote*; and Object 3: *dlef*).

PROCEDURE

Each child was tested individually in a playroom. The child sat with an experimenter and watched a series of videos presented on an Apple laptop in Keynote. The procedure was based primarily on Koenig & Harris (2005) and Pasquini et al. (2007), with some minor adaptations taking into account the accented input, which will be detailed below. The experimenter explained, "Now we're going to watch some videos of my friends. He's wearing a blue shirt [pointed to foreign-accented speaker on left], and

he's wearing a red shirt [pointed to native-accented speaker on the right]. They're going to show you some things and tell you what they're called. Let's watch." The child then watched three familiarization trials and three test trials.

Familiarization Trials

In each of the three familiarization trials, the moderator presented the speakers with a familiar object (a cup, a hat, or a shoe), placed it on the table between the seated speakers, and asked "Can you tell me what this is called?" In turn, each of the speakers responded, using either the appropriate label (e.g. *hat*) or an inappropriate label (e.g. *telephone*) to establish their reliability. In related work pursuing children's responses to accented input, children failed to distinguish native speakers from foreign speakers, possibly due to having exposed children to an insufficient sample of accented speech (Andre Souza, personal communication). To ensure that children in the present study had adequate exposure to both native-accented and foreign-accented input, the scripted response used in earlier work was elaborated from "That's a hat" to "Oh, it's a hat. I've seen one of these before. That's a hat." After both speakers labeled the object with this 3-sentence sequence, the live experimenter asked the child for the correct name of the label (ENDORSE question). In previous studies (e.g. Pasquini et al., 2007) the experimenter repeated the labels offered by each speaker before asking the child to identify the object, but this was changed in order to avoid having the experimenter repeat anything the foreign-accented speaker said. The experimenter avoided repeating the labels for two reasons: to avoid 'correcting' the foreign-accented speaker's pronunciation by providing her own native-accented interpretation of his novel label, and to avoid having the experimenter implicitly endorse the native-accented speaker's phonotactically illegal labels via repetition. Instead, audio files of each speaker's final production (from the

"That's an X" utterance) were embedded in the Keynote slide and were played in place of the experimenter repeating the labels; these audio files are represented below in bold. Thus, after hearing both speakers offer labels, the experimenter asked the ENDORSE question: "The boy in the red shirt said it's a **hat** [the experimenter clicked to play the file for the native-accented speaker's production, **hat**], and the boy in the blue shirt said it's a **telephone** [the experimenter clicked to play the file for the foreign-accented speaker's production, **telephone**]. What do you say it's called?" After the third familiar trial, the experimenter asked the JUDGMENT question: "Now one of these boys was not very good at naming these things. Which one was not very good at naming these things?" Speaker accuracy (native-accurate/foreign-inaccurate vs. native-inaccurate/foreign-accurate) and speaker order (native-accented speaker speaks first or second) were counterbalanced across participants, and questions confirming the familiar object labels always matched speaker order (i.e. if the native-accented speaker spoke first, his label was repeated first in the question). Speaker order was consistent across familiarization and test trials.

Test Trials

The three test trials followed the pattern of the familiarization trials, except that before each video the experimenter produced a picture of a novel object and asked the child "Can you tell me what this is called?" After agreeing that they didn't know the name of object, the experimenter said "I know that one of these boys will know. Which one would you like to ask?" – the ASK question. In cases where the child selected the moderator, the experimenter responded good-naturedly "Oh, he won't tell us what this is called! Which of the other boys would you like to ask?" The video then played and each speaker produced a novel label for the object. The foreign-accented speaker always

produced a phonotactically legal label (e.g. *koob*), and half the participants heard the native-accented speaker produce a phonotactically legal label (e.g. *tream*), while the other half heard the native-accented speaker produce a phonotactically illegal label (e.g. *pfote*). In conditions in which the native-accented speaker produced ill-formed words, his novel labels were ill-formed across all three test trials. As in the familiar trials, each test trial was followed by the live experimenter asking the child the ENDORSE question: "The boy in the red shirt said it's a **novel word** [the experimenter clicked to play the file for the native-accented speaker's production], and the boy in the blue shirt said it's a **novel word** [the experimenter clicked to play the file for the foreign-accented speaker's production]. Can you tell me what this is called?" Again, after the three test trials, the experimenter asked the child to point to the speaker that "was not very good" at naming the novel objects for the second JUDGMENT question.

Results

Children produced responses for the three ASK questions (which informant to ask about the name of the novel object), the three ENDORSE questions (whose label they repeated to name the novel object), and the two JUDGMENT questions (identifying the unreliable speaker after the familiar trials and again after the test trials). Responses to each question type will be examined in turn. Figure 1 illustrates how often the native-accented speaker and the foreign-accented speaker were selected on the three ASK questions. The number of times out of the three trials that a speaker's label was endorsed is shown in Figure 2. Dark gray bars represent how often the speaker was asked or endorsed when he was reliable, and the light gray bars show the number of times the speaker was asked or endorsed when he was unreliable.

To determine if children had a preference for asking one speaker or the other on the ASK questions, the number of times each child asked each speaker was submitted to a 2 x 2 x 2 mixed-design ANOVA with accent (native or foreign) as a within-subjects factor and reliability (reliable or unreliable) and label phonotactics (legal or illegal sequence) as between-subjects factors. The native-accented speaker was chosen more, both when he was reliable (M=2.66, SD=0.65) and when he was unreliable (M=1, SD=0.74), than the foreign-accented speaker (M=2, SD=0.74 when reliable, and M=0.33, SD=0.65 when unreliable), but both speakers were chosen more when reliable than when unreliable. The difference between the dark gray and the light gray bars appears to be the same across speakers; that is, that both speakers were equally more likely to be chosen when they were reliable than when they were unreliable. This was confirmed in the ANOVA: there were significant main effects of accent ($F(1,20)=5.33$, $p<0.05$, $\eta^2=0.09$)

and of reliability ($F(1,20)=32.258$, $p<0.001$, $\eta^2=0.56$). There was no interaction between accent and reliability ($F(1,19)=1.12$, *ns*). There was no effect of label phonotactics ($F(1,20)=2.507$, *ns*; legal phonotactics: $M=1.36$, $SD=1.13$; illegal phonotactics: $M=1.92$, $SD=1.08$), and the interaction between reliability and label phonotactics was not significant ($F(1,20)=0.323$, *ns*; reliable with legal phonotactics: $M=2.17$, $SD=0.79$; reliable with illegal phonotactics: $M=2.83$, $SD=0.41$; unreliable with legal phonotactics: $M=0.56$, $SD=0.78$; unreliable with illegal phonotactics: $M=1$, $SD=0.63$). Children were more likely to ask the native-accented speaker than the foreign-accented speaker, and were more likely to ask the reliable speaker than the unreliable speaker, but there was no difference in the magnitude of these preferences across speakers. Also, the phonotactics of the native-accented speaker's novel label had no impact on which speaker the child asked.

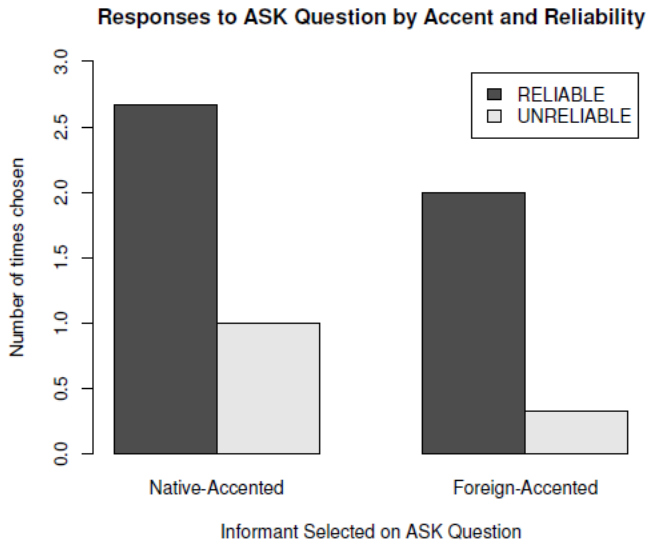

Figure 1. Number of times children selected the native-accented versus foreign-accented speakers on ASK questions, as a function of speaker reliability.

Children's responses to the ENDORSE questions were also submitted to a 2 x 2 x 2 mixed-design ANOVA with accent (native or foreign) as a within-subjects factor and reliability (reliable or unreliable) and label phonotactics (legal or illegal sequence) as between-subjects factors. On 12 ENDORSE trials no label was produced (two children produced no label on any of the three trials), and for four ENDORSE responses the child either indicated the speaker and not his label or it was unclear which label the child was reproducing (e.g. *fick* was produced when the competing labels were *fisp* and *blick*). This left 56 ENDORSE responses coded according to which speaker's label was reproduced. The reliable speaker's label was chosen more, when he was either native-accented (M=2.08, SD=1.24) or foreign-accented (M=2.17, SD=0.94), than the unreliable speaker's label (M=0.17, SD=0.58 when the native-accented speaker was unreliable, and M=0.25, SD=0.62 when the foreign-accented speaker was unreliable). It is not clear from the graph if the slightly higher labeling in favor of the foreign-accented speaker is significantly different from the native-accented speaker. Unlike for the ASK question, the ANOVA produced only a significant main effect of reliability ($F(1,20)=38.058$, $p<0.001$, $\eta^2=0.56$) and no effect of accent ($F(1,20)=0.072$, *ns*) or label phonotactics ($F(1,20)=1.636$, *ns*). There was no significant interaction between reliability and label phonotactics ($F(1,20)=0.288$, *ns*). Whereas both reliability and accent significantly influenced ASK responses, only reliability was a factor in determining which label children endorsed. Confirming these apparent differences between ASK and ENDORSE responses, the correlation between the two was non-significant ($r(20)=-0.096$, $p=0.67$). The label endorsed by children was also unaffected by label phonotactics.

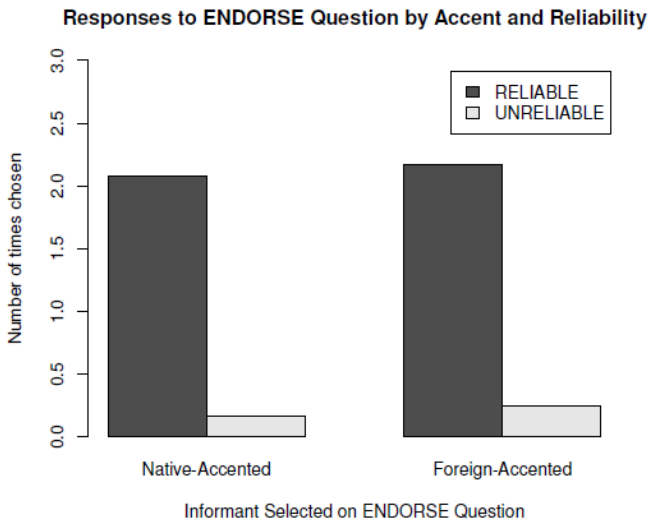

Figure 2. Number of times children selected the native-accented versus foreign-accented speakers on ENDORSE questions, as a function of speaker reliability.

The two judgment questions (the first after the familiar trials and the second after the test trials) were evaluated in two Fisher's exact tests to determine if there was a contingency between the speaker chosen as unreliable ("not very good at naming these things") and the speaker's established reliability. On the familiar trials, all 24 children correctly identified the unreliable speaker ($p<0.001$), and on the test trials, all but one child correctly identified the unreliable speaker ($p<0.001$). Interestingly, the one child who misidentified the unreliable speaker after the test trials indicated that the foreign-accented speaker was unreliable when in fact he had been reliable, even though the child correctly selected the native-accented speaker as unreliable after the familiar trials. Overall, children correctly identified the unreliable speaker in both JUDGMENT questions.

Discussion

The results of the current experiment suggest that children prefer to seek information from native-accented speakers but that despite this preference they are able to objectively evaluate the information offered based on the speaker's prior reliability and not on his accent. Four-year-olds were significantly more likely to choose the reliable speaker, and to choose the native-accented speaker, on the ASK questions. That is, when the native-speaker was reliable, children overwhelmingly chose him over the foreign-accented speaker, but when the foreign-accented speaker was reliable, the children still mostly chose the reliable (foreign-accented) speaker, but significantly less so than when the native-accented speaker was reliable. On ENDORSE and JUDGMENT questions, however, the accentedness of the speaker did not influence responses, and children consistently chose the reliable speaker.

The manipulation of the phonotactic validity of the novel label, under the hypothesis that an unreliable native-accented speaker producing an illegal sequence may add support to the reliability of the foreign-accented speaker, proved unnecessary since preschoolers were able to separate their social biases from novel information assessment. However, there was also no difference between the phonotactic conditions. The lack of significance of novel label phonotactics may be due less to an insensitivity to native language phonotactics and rather to the native speaker's inability to naturally produce the illegal sequences. The native speaker in the present study may have produced these sequences with subtle changes to make them legal (e.g. inserting /ə/ to break up clusters like /pf/), thus leading the labels to sound more English-like (e.g. /pəfot/). In future work, legal and illegal novel labels should again be included but care should be taken to recruit

a native speaker with the ability to naturally produce illegal labels. For example, all future illegal labels should include sequences following the phonotactics of a particular language, such as German, so that the native speaker selection criteria include proficiency in this language. A proficient L2 speaker is likely to articulate the sequences more naturally even though they are illegal in English. Alternately, novel words could be chosen so that they include sequences that are possible in some varieties of English (e.g. /ʃp/ in spiel) or that are very low frequency (e.g. /sf/ in sphinx); in this case, the adult informant would be able to produce the novel labels while their very low frequency in speech directed to children would essentially make them illegal sequences.

The finding that children prefer to consult native-accented informants is consistent with previous work in which 5-year-olds showed a preference for selecting native-accented children as friends, even when accent and race were in conflict (Kinzler et al., 2007, 2009, 2011). From their work, Kinzler and colleagues have concluded that children prefer to learn from native-accented speakers since accent serves as a strong cue of who belongs to the child's own native culture group. The authors report that such community members may be interpreted by children as having important, culturally relevant, conventional knowledge. The prediction made here that children would show this bias in ENDORSE and JUDGMENT trials as well as in ASK trials may be interpreted as having been based on a strong version of Kinzler's proposal (Kinzler et al., 2011). The present study instead supports a weaker version of the proposal, that children prefer social interactions with in-group members but that this preference does not interfere with children's objective evaluation of novel information, since preschoolers were unaffected by speaker accentedness when judging reliability and novel label conventionality. This apparent lack of concern for accentedness when making an explicit judgment about informant accuracy suggests that preschoolers may be able to separate

their social affiliations from their evaluations of reliability, even while those affiliations affect who they choose to consult. However, outside of an experimental setting, this preference for appealing to in-group informants would mean that children would not gain access to the information known by out-group informants, even if they knew that the out-group informants were more reliable. In the current study, the video that followed the ASK question included novel labels from both the native- and foreign-accented speakers, regardless of who the child chose to ask. Because of this exposure, children were better informed than might be the case if they only gathered information from in-group members. It remains to be seen how children would respond to a novel label from an unreliable native-accented speaker, if this label is the only option presented, since the present study suggests children would not endorse or use such a label. However, results from adults are not optimistic for continued objectivity. Adults who were asked to rate trivia sentences spoken by native- or foreign-accented speakers rated statements produced by accented speakers as significantly less truthful than native-speaker productions (Lev-Ari & Keysar, 2010). It may be the case that the preference for in-group speakers continues or strengthens during childhood so much so that the objective evaluation of information is compromised.

Recent work by Corriveau, Kinzler, & Harris (2013) has pursued the question of the reliability of accented speakers using the same speaker reliability paradigm employed here. There are some important differences in the execution of the two studies, which will be addressed below, but the similarity in design and in test questions makes for an interesting comparison. The 4- and 5-year-olds in Corriveau et al. (2013) asked and endorsed the reliable speaker significantly more than the unreliable speaker, regardless of accent. However, the children were unable to consistently judge speaker reliability and were more likely to claim that the foreign-accented speaker "didn't know" the correct

labels when unreliable and that the native-accented speaker was "just pretending" when unreliable. This correlation between responses on ASK and ENDORSE questions is absent from the present findings, as is the bias against the foreign-accented speaker on the JUDGMENT questions. It is unclear why, if children seek information and endorse novel labels from foreign-accented speakers, they are unable to objectively assess reliability in the explicit JUDGMENT question. The authors attribute this difference to children drawing distinct conclusions about speaker intent (e.g. unreliable native speakers are being silly) or speaker ignorance (e.g. unreliable accented speakers didn't know the correct label), but the findings of the current study present no indication that children treat unreliable foreign-accented speakers as any less knowledgeable than unreliable native-accented speakers. In fact, in order for a child to make a connection between speaker accent and linguistic competence more generally, they may be bringing prior experience with accented speakers to the experiment.

There are at least three variables in Corriveau et al. (2013) that may have contributed to the somewhat inconsistent responses from children across the three questions. First, while all children in the current study were monolingual speakers of English with minimal exposure to foreign-accented speech, the preschoolers in Corriveau et al. (2013) were not screened for bilingualism or for exposure to accented speech. However, a child whose parent or parents speak with a foreign accent may be more likely to select speakers based on reliability and not on accentedness, particularly for the ASK questions. The final two concerns with the Corriveau et al. (2013) procedure involve the accented speech produced by the informants and the influence of the live experimenter on the accented speech. Both informants in the related study were Spanish-English bilinguals who were asked to produce native-accented speech in half the conditions and foreign-accented speech in the other half. The informants presumably use only their

native accent on a regular basis, although no further information is provided about their linguistic backgrounds, so the authenticity of coached accents, even from bilinguals, is doubtful. Adult native-speakers are able to distinguish authentic from imitated foreign accents (Neuhauser & Simpson, 2007), so accuracy and not comfort may be the most important factor in a foreign accent. Other researchers have acknowledged needing to coach speakers to produce accents other than the speaker's native accent (Evans & Iverson, 2004; Trude, Tremblay, & Brown-Schmidt, under review) or have traded speaker counterbalancing for authentic accents (Clarke & Garrett, 2004), as was done in the present study. It is thus unclear how consistent or accurate the accented speech was in Corriveau et al. (2013). Furthermore, future work should consider how degree of intelligibility and comprehensibility of accented speech influences reliability judgments, since these factors affect processing speed in adults (Derwing & Munro, 1997, inter alia). Finally, having the live experimenter repeat the labels produced by the informants means that each accented pronunciation was 'corrected' in a native accent, thus highlighting the difference between the foreign-accented speaker's accent and how a member of the child's linguistic community would pronounce it. This emphasis on accent may have drawn more of the children's attention than they typically devote to variation in speech, so their responses to JUDGMENT questions may have been artificially biased against the foreign-accented speaker.

Future work should include as participants bilingual children, or children with high rates of exposure to foreign-accented speech, to determine if they are also inclined to associate with native-accented speakers when asking for novel labels, even while continuing to successfully evaluate reliability. Unlike the children in the present study, who had more limited exposure to accented speech and foreign languages, a bilingual

population may be less likely to show biases in social affiliations via the ASK question and may instead disregard accentedness information in favor of previous reliability.

Studying a bilingual population also supports a further manipulation with regards to the phonotactics of the novel labels by creating novel labels following the phonotactics of one of the bilinguals' languages. It is not yet clear at what point bilingual children are able to use the phonotactics of each language to make judgments about their interlocutors' proficiency in a given language, or how these judgments may affect the endorsement of novel labels, but bilinguals may be able to use novel label phonotactics to guide label endorsement. In the case of Spanish-English bilinguals, if a bilingual speaker using their non-dominant language is reliable but produces a novel label with phonotactics specific to the language not being used (e.g. the language of test is English but the label follows Spanish phonotactics), children may be more forgiving than their monolingual counterparts.

In conclusion, the current study suggests that young children separate their social biases from their objective assessment of novel information. In accordance with previous findings of preschoolers' preference for in-group social interactions, four-year-olds in this study preferred to ask the native-accented speaker for information, even when this speaker had been unreliable. However, the findings here also support the ability of children to objectively evaluate novel labels and explicitly judge speakers' reliability, regardless of whether the native- or foreign-accented speaker had been reliable. This differentiation follows from a weak version of the proposal introduced by Kinzler and colleagues (Kinzler et al., 2011), which explains the native-speaker preference in terms of native speakers being able to share conventional cultural knowledge. Children may be better able to assess competing information than previously thought, but their resistance

to asking out-group members for help casts doubt on how often they may get exposure to reliable, though potentially culturally disfavored, information.

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